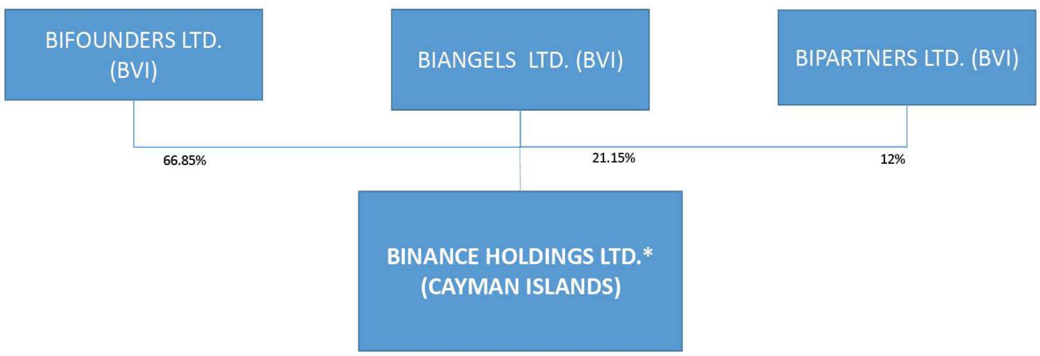
EXHIBIT 21

BINANCE HOLDINGS LTD.
STRUCTURE CHART

Each of these entities is (directly or indirectly) wholly or majority owned by Changpeng Zhao



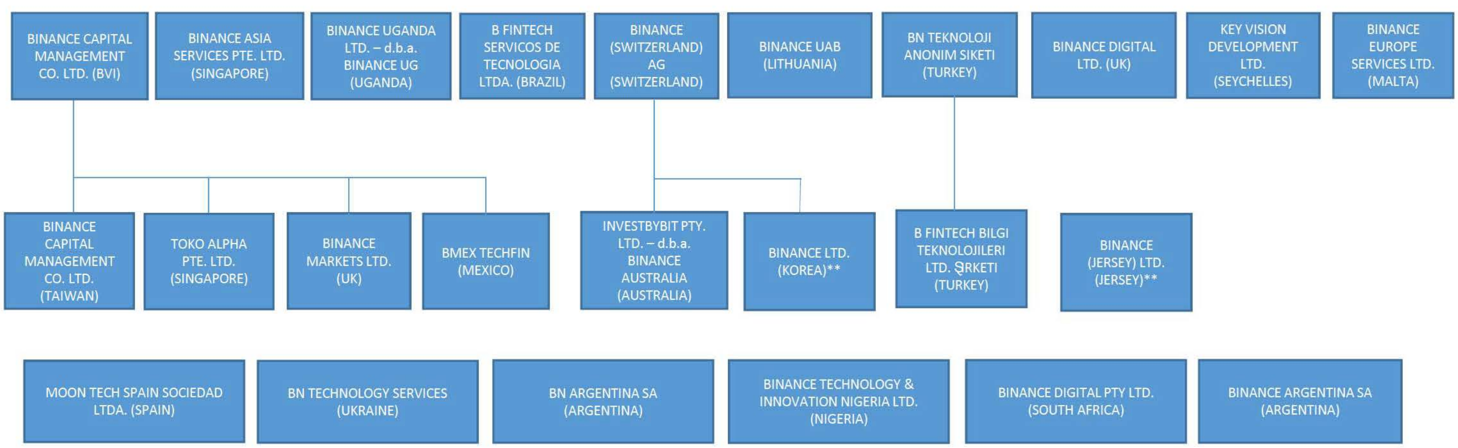
* Binance Holdings Ltd. holds the majority of Binance.com's trademarks and domains and enters into certain related vendor, staffing, and intercompany agreements. It does not own or operate the Binance.com virtual asset trading platform (the "Binance Exchange"), and nor does it hold any of the entities that operate the Binance Exchange. Binance Holdings Ltd. does not have any subsidiaries.

Exhibit
0002
2/10/2022

FUNCTIONAL STRUCTURE CHART OF BINANCE OPERATORS*

Binance Operators include the entities that are related to exchange trading activity, including fiat on-ramps/off-ramps. This chart also includes local exchanges (even though those local exchanges are local and, therefore, not technically operating on the .com platform). Binance Operators do not include entities that are involved in creating coins (e.g., stablecoins) or unrelated to exchange trading activity. This chart reflects the entities that either hold the entities in the relevant jurisdiction or that functionally operate the exchange.

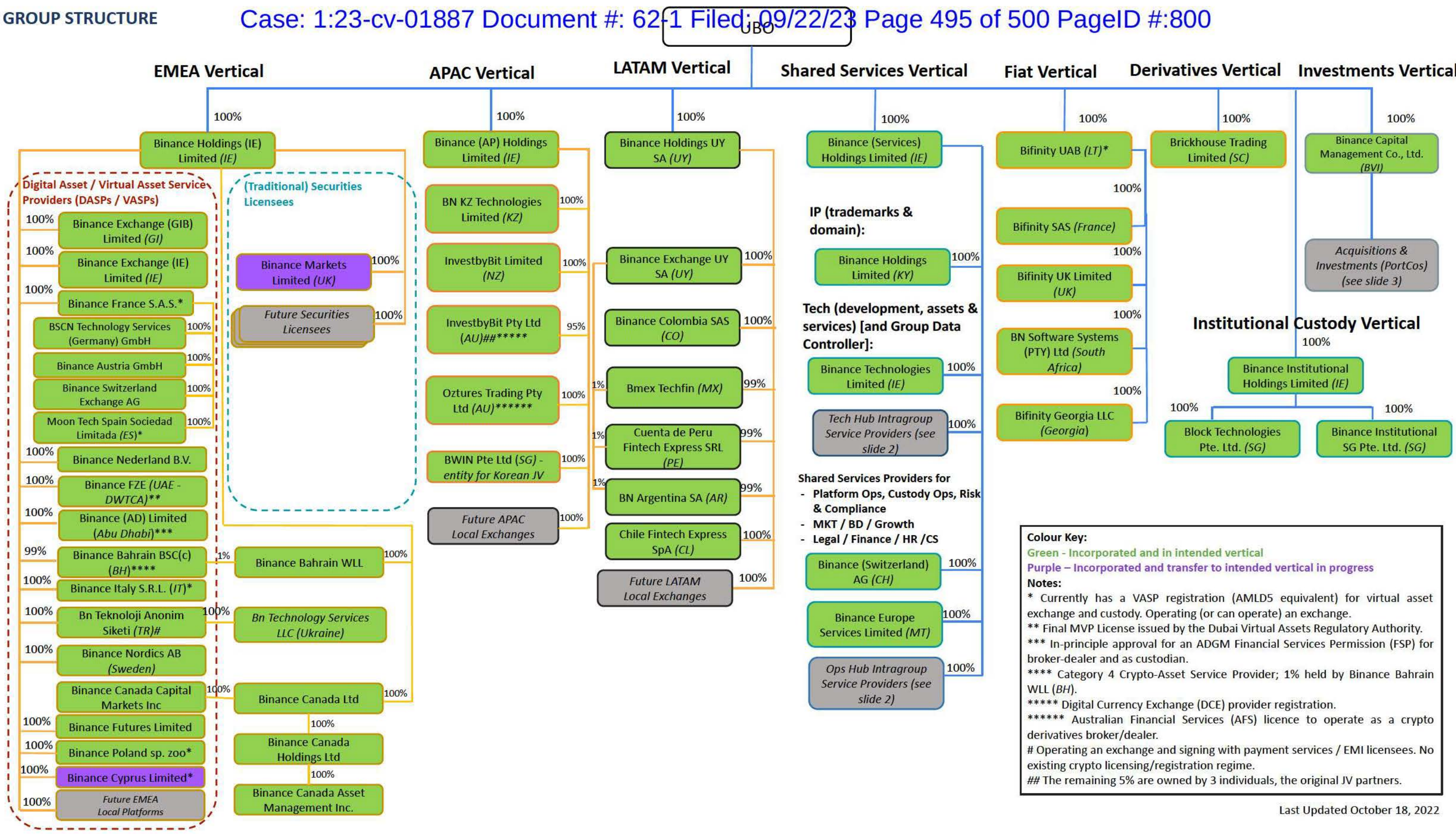
Each of these entities is (directly or indirectly) wholly or majority owned by Changpeng Zhao



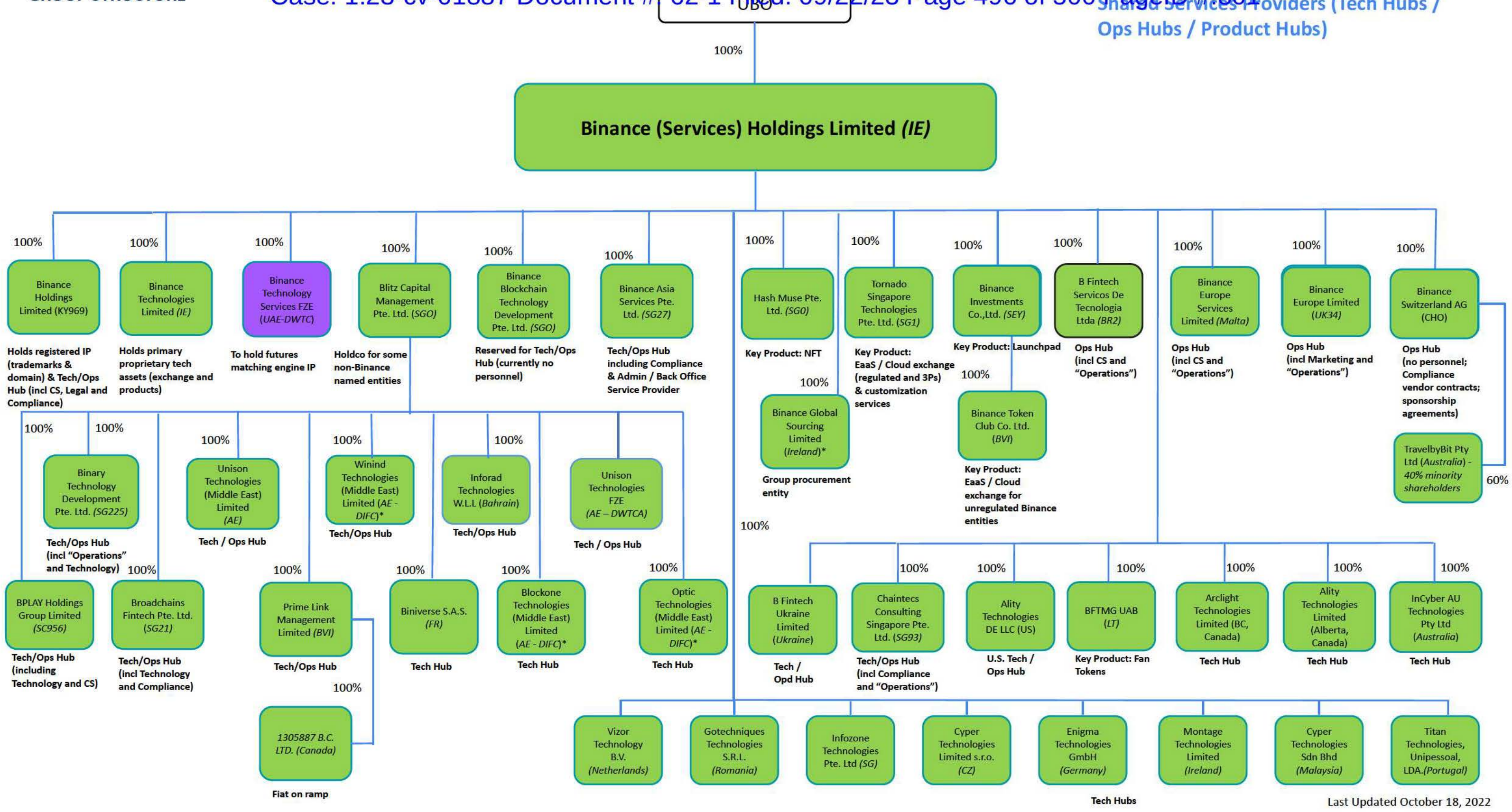
* In addition to the operators above, there are other entities in existence that are involved in other parts of the business and may share the Binance name. It is our understanding that these other Binance entities do not functionally operate the Binance Exchange.

** Binance (Jersey) Ltd. (Jersey) and Binance Ltd. (Korea) are currently in the process of being wound down.

GROUP STRUCTURE



GROUP STRUCTURE



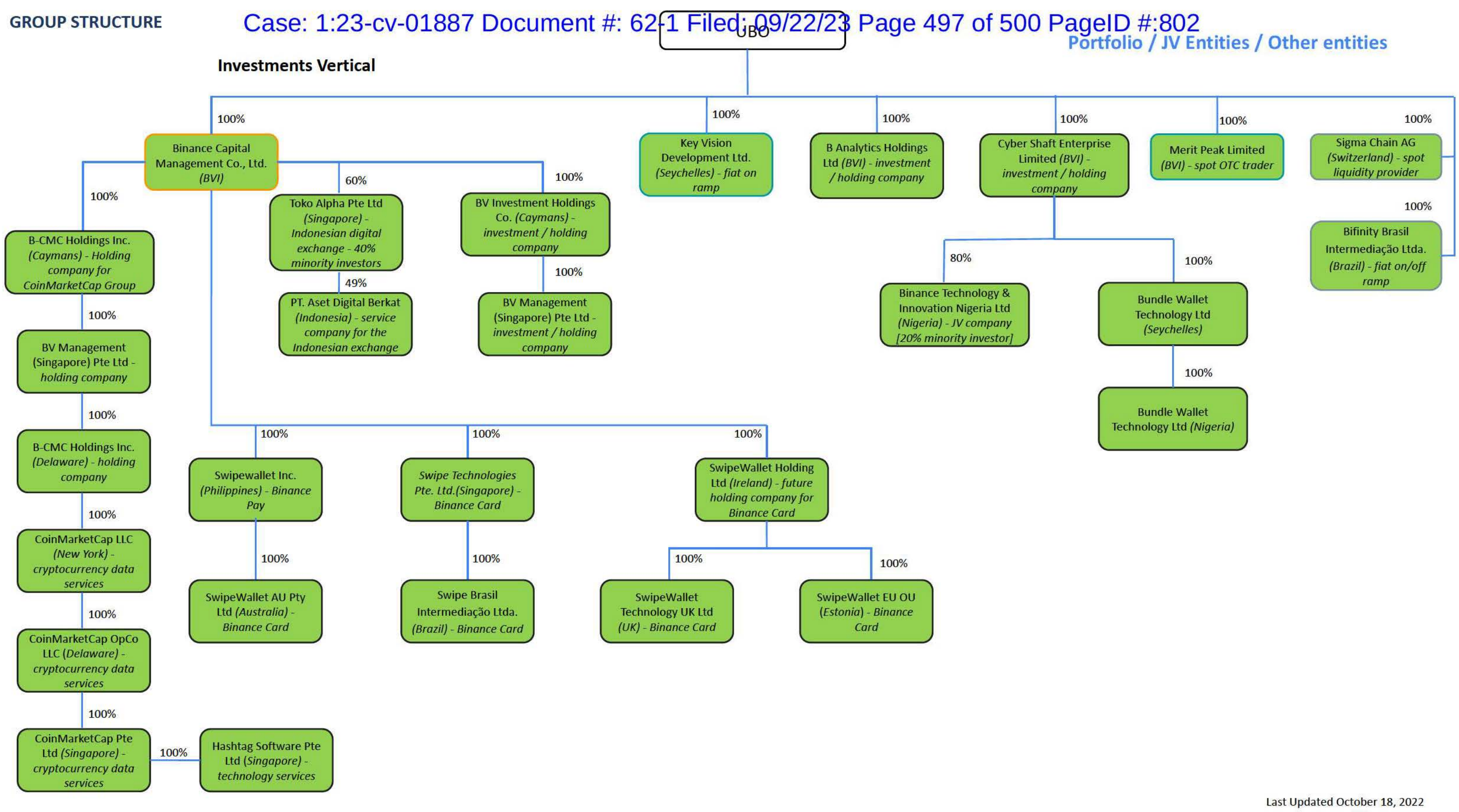

GROUP STRUCTURE
Investments Vertical
UBO
Portfolio / JV Entities / Other entities
Binance Capital Management Co., Ltd. (BVI)
Key Vision Development Ltd. (Seychelles) - fiat on ramp
B Analytics Holdings Ltd (BVI) - investment / holding company
Cyber Shaft Enterprise Limited (BVI) - investment / holding company
Merit Peak Limited (BVI) - spot OTC trader
Sigma Chain AG (Switzerland) - spot liquidity provider
Bifinity Brasil Intermediação Ltda. (Brazil) - fiat on/off ramp
B-CMC Holdings Inc. (Caymans) - Holding company for CoinMarketCap Group
BV Management (Singapore) Pte Ltd - holding company
B-CMC Holdings Inc. (Delaware) - holding company
CoinMarketCap LLC (New York) - cryptocurrency data services
CoinMarketCap OpCo LLC (Delaware) - cryptocurrency data services
CoinMarketCap Pte Ltd (Singapore) - cryptocurrency data services
Hashtag Software Pte Ltd (Singapore) - technology services
Toko Alpha Pte Ltd (Singapore) - Indonesian digital exchange - 40% minority investors
PT. Aset Digital Berkat (Indonesia) - service company for the Indonesian exchange
BV Investment Holdings Co. (Caymans) - investment / holding company
BV Management (Singapore) Pte Ltd - investment / holding company
Binance Technology & Innovation Nigeria Ltd (Nigeria) - JV company [20% minority investor]
Bundle Wallet Technology Ltd (Seychelles)
Bundle Wallet Technology Ltd (Nigeria)
Swipewallet Inc. (Philippines) - Binance Pay
SwipeWallet AU Pty Ltd (Australia) - Binance Card
Swipe Technologies Pte. Ltd.(Singapore) - Binance Card
Swipe Brasil Intermediação Ltda. (Brazil) - Binance Card
SwipeWallet Holding Ltd (Ireland) - future holding company for Binance Card
SwipeWallet Technology UK Ltd (UK) - Binance Card
SwipeWallet EU OU (Estonia) - Binance Card
100%
60%
49%
80%
Last Updated October 18, 2022

EXHIBIT 22

CoinDesk

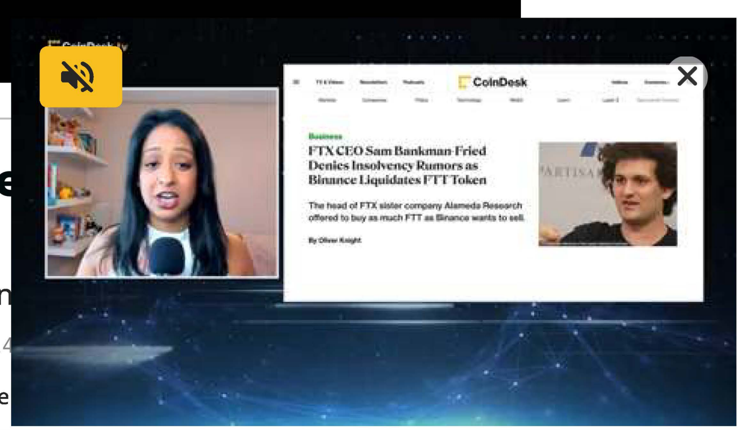
BTC $66,819.71 +2.09% ETH $3,088.23 +5.11% BNB $579.34 +1.79% SOL $1

Finance

Binance to Sell Rest of FTX Token Holdings as Alameda CEO Defends Firm's Financial Condition

Alameda's CEO offered to buy Binance's FTT token holdings for $22 apiece.

By Tracy Wang, Oliver Knight Nov 6, 2022 at 8:55 a.m. PST Updated May 8, 2023 at 9:01 p.m. PDT



How crypto-savvy are you?

Binance CEO Changpeng Zhao did not say how much FTT his firm will sell, but that as part of the cryptocurrency exchange's exit from FTX equity last year, Binance received roughly $2.1 billion worth in the form of BUSD (Binance's stablecoin) and FTT.

CZ 🔶 BNB
@cz_binance · Follow

As part of Binance's exit from FTX equity last year, Binance received roughly $2.1 billion USD equivalent in cash (BUSD and FTT). Due to recent revelations that have came to light, we have decided to liquidate any remaining FTT on our books. 1/4

7:47 AM · Nov 6, 2022

21.8K Reply Share this post

Read 80 replies

…while, tweeted tha…
…l condition is stro…
…y the balance sheet…
…so offered, in a reply…
…st, to buy his firm's FTT…
… $22 each.

Caroline @carolinecapital · Follow

@cz_binance if you're looking to minimize the market impact on your FTT sales, Alameda will happily buy it all from you today at $22!

8:03 AM · Nov 6, 2022

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Read 2K replies

Speculation over the FTT token led to extreme price volatility amid the back-and-forth Twitter exchange.

Blockchain explorer Etherscan showed an address moving 23 million FTT (worth approximately $530 million) to a Binance exchange wallet Saturday afternoon.

DeFi Sniper
@DefiSniper · **Follow**
Automated

🐳⚠️ Transfer $583M worth of $FTX Token from 0x04b4 to 0x28c6 on Ethereum 💸

(Txhash) Details | Etherscan
nsaction info for txhash
8850a4b8b7ef9269da22b5

Share this post

Read 8 replies

trading firm owned $5.8 billion of FTT tokens (including FTT tokens pledged as collateral) as of June 30. Alameda was revealed to have $14.6 billion in assets and $8 billion in liabilities, including $7.4 billion in unidentified loans.

On Saturday, Alameda Research CEO Caroline Elli... ponded to the rumors by tweeting that ...er $10 billion of assets "not ...aked balance sheet. Ellison ...had undisclosed he... returned a bulk o...

...sale of Binance's FT... ...erpreted as a slight agai... ...xchange.

How crypto-savvy are you?

- Crypto / Blockchain knowledgeable
- Crypto / Blockchain-curious learner
- Crypto / Blockchain expert

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...acy Wang

Tracy was the deputy managing edit...

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- Crypto / Blockchain knowledgeable
- Crypto / Blockchain-curious learner
- Crypto / Blockchain expert

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Read more about

FTX | Binance | Sam Bankman-Fried | Changpeng "CZ" Zhao | FTT

How crypto-savvy are you?

- Crypto / Blockchain knowledgeable
- Crypto / Blockchain-curious learner
- Crypto / Blockchain expert

EXHIBIT 23

CoinDesk

Binance to Sell Rest of FTX Token Holdings as Alameda CEO Defends Firm's Financial Condition

Tracy Wang, Oliver Knight
Updated November 6, 2022 · 3 min read

Binance's CEO, responding to a CoinDesk scoop about trading firm Alameda Research's balance sheet, tweeted Sunday that he will sell the remaining FTT tokens held on his books that he took on as part of his exit from Alameda sister company FTX last year.

Binance CEO Changpeng "CZ" Zhao did not say how much FTT his firm will sell, but that as part of the cryptocurrency exchange's exit from FTX equity last year, Binance received roughly $2.1 billion worth in the form of BUSD (Binance's stablecoin) and FTT.

to light, we have decided to liquidate any remaining FTT on our books. 1/4

7:47 AM · Nov 6, 2022

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Alameda's CEO, meanwhile, tweeted that her trading firm's financial condition is stronger than what was reflected by the balance sheet CoinDesk wrote about. She also offered, in a reply to the Binance CEO's post, to buy his firm's FTT token holdings for $22 each.

Caroline
@carolinecapital · Follow

@cz_binance if you're looking to minimize the market impact on your FTT sales, Alameda will happily buy it all from you today at $22!

8:03 AM · Nov 6, 2022

8.4K Reply Share

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Speculation over the FTT token led to extreme price volatility amid the back-and-forth Twitter exchange.

Blockchain explorer Etherscan showed an address moving 23 million FTT (worth approximately $530 million) to a Binance exchange wallet Saturday afternoon.

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🐳⚠️ Transfer $583M worth of $FTX Token from 0x04b4 to 0x28c6 on Ethereum 💸

etherscan.io
Ethereum Transaction Hash (Txhash) Details | Etherscan
Ethereum (ETH) detailed transaction info for txhash 0x449adc3af3a36d62994d08850a4b8b7ef9269da22b5a11555495bf2e27...

7:30 AM · Nov 5, 2022

42 Reply Share

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The price of FTT declined 14% over a 24-hour period to $22.02, its lowest price since June, according to CoinMarketCap. As of press time, the price of FTT rebounded to $23.03.

CZ's announcement comes after rumors swirled about the financial health of Sam Bankman-Fried's trading firm Alameda Research after a leaked balance sheet reviewed by CoinDesk revealed the trading firm owned $5.8 billion of FTT tokens (including FTT tokens pledged as collateral) as of June 30. Alameda was revealed to have $14.6 billion in assets and $8 billion in liabilities, including $7.4 billion in unidentified loans.

On Saturday, Alameda Research CEO Caroline Ellison responded to the rumors by tweeting that Alameda had over $10 billion of assets "not

as a slight against a competitor exchange.

"We typically hold tokens for the long term. And we have held on to this token for this long," tweeted CZ. "We stay transparent with our actions."

UPDATE (Nov. 6, 17:17 UTC): *Adds additional context in body, details from Etherscan.*

UPDATE (Nov. 6, 18:10 UTC): *Updates FTT price.*

"The Late Show" host spotted an uncomfortable momen from the former president's criminal trial.

People

Maria Bello Marries Longtime Partner Dominique Crenn in 'Bohemian, Chic' Mexico Wedding (Exclusive)

The actress and the Michelin-starred chef tied the knot on May 12 surrounded by 140 guests including Patricia Arquette, Mariska Hargitay and Gavin Rossdale

HuffPost

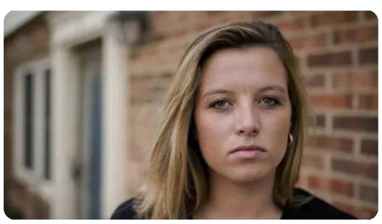
Jake Tapper Immediately Fact-Checks Trump's 'Very Angry' Courthouse Rant

Donald Trump shouted about the case against him in remarks to reporters outside the Manhattan courtroom.

InStyle

Dua Lipa's Designer Micro Shorts Are So Short They're Practically Underwear

And they came with the tiniest Gucci belt.



The Canadian Press

American sought after 'So I raped you' Facebook message detained in France on 2021 warrant

LYON, France (AP) — An American accused of sexually assaulting a Pennsylvania college student in 2013 and later sending her a Facebook message that said, "So I raped you," has been detained in France after a three-year search. A prosecutor in Metz, France, confirmed Tuesday that Ian Thomas Cleary, 31, of...

Variety

'Mad Max' Director Says 'There's No Excuse' for Tom Hardy and Charlize Theron's 'Fury Road' Set Feud: Tom 'Had to Be Coaxed Out of His Trailer'

With his "Mad Max: Fury Road" prequel movie "Furiosa" gearing up for both its world premiere at the Cannes Film Festival and its theatrical release later this month, director George Miller recently spoke to The Telegraph and reflected on the notorious feud that broke out between stars Tom Hardy and Charliz...

Idaho Statesman

Angler's discovery leads officials to 14 huge invasive fish in CO. See the pond monsters

"Yes, many Jaws jokes were made."

The Canadian Press

'Make sure it doesn't get released;' Star witness Michael Cohen implicates Trump in hush money case

For Her Uncle

"That is going to be extraordinarily challenging for him," Donald Trump's niece.

People

Dwayne Johnson and Wife Lauren Hashian Sing Together in Mother's Day Video: 'We Make Up the Rules'

The actor praised his wife as "blessed from the heavens above with kindness, empathy, compassion, beauty and an abundance of musical talents"

HuffPost

Donald Trump, Who Is Banned From Buying Firearms, To Address NRA

The former president's appearance will mark the ninth time that he has addressed National Rifle Association members at a major public gathering.

Business Insider

A 24-year-old spent $140,000 buying and converting a Mercedes van. Take a look inside the luxury home on wheels.

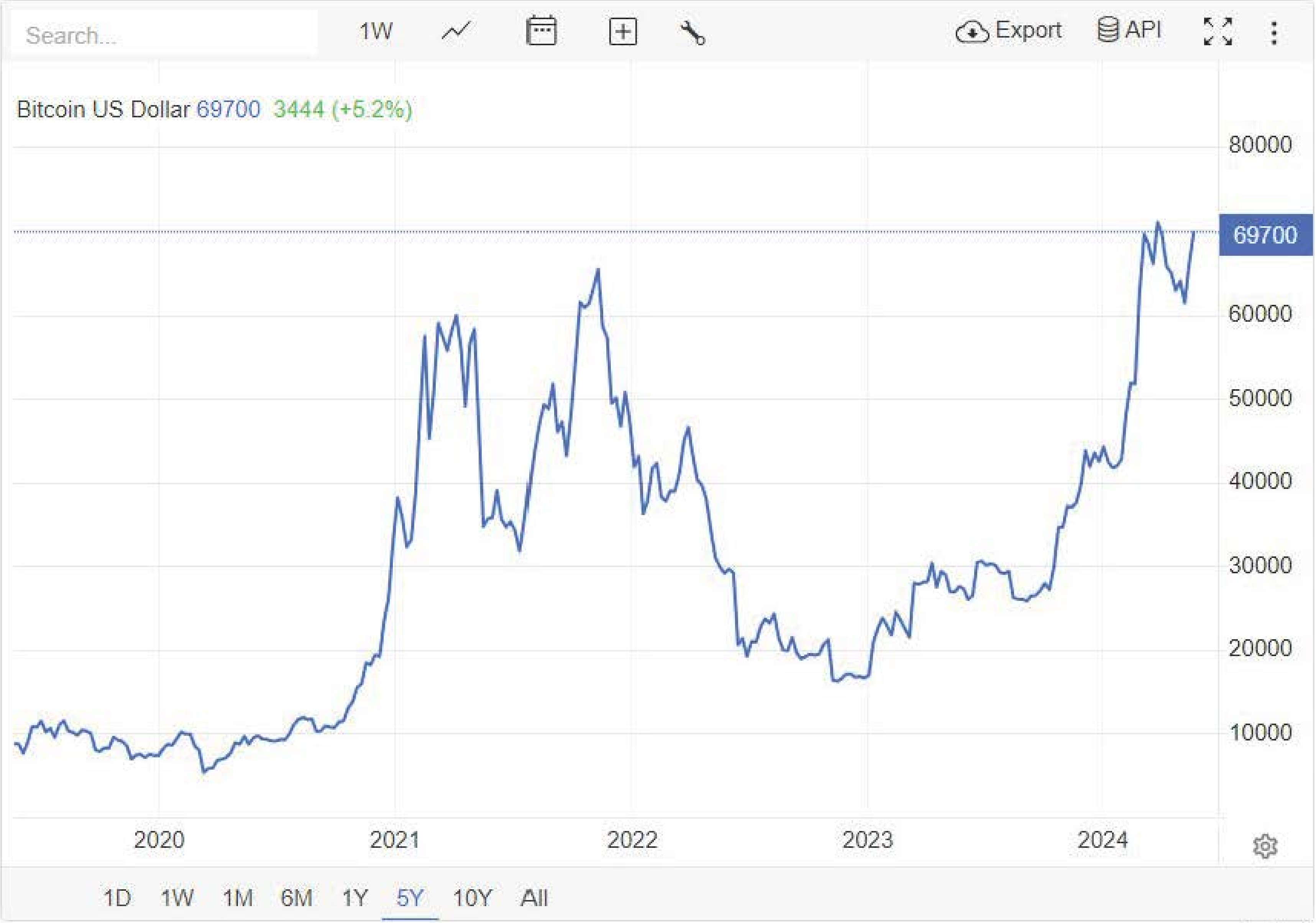
After building "cookie-cutter" camper vans, Abbe Minor set out to create something more bold. Her luxury van includes Moroccan plaster and organic shapes.

EXHIBIT 24

BTCUSD Bitcoin US Dollar

Chart | Quotes | Alerts | Export

Exchange Rate	Daily Change	Monthly	Yearly	Q2 Forecast
69700	3444 ▲5.2%	▲7.16%	▲159.24%	64322



Feedback

Source: https://www.statista.com/statistics/326707/bitcoin-price-index/

Bitcoin (BTC) price per day from August 24, 2021 to May 19, 2024

(in U.S. dollars)

Zoomable Statistic: Select the range in the chart you want to zoom in on.

Additional Information

Show source

Source

→ Show sources information
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In cooperation with

CoinGecko

Release date

May 2024

Region

Worldwide

Survey time period

August 24, 2021 to May 19, 2024

Special properties

Monthly figures are as of the end of that particular month; Opening price

Supplementary notes

Figures have been rounded.

Open this statistic in...

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Citation formats

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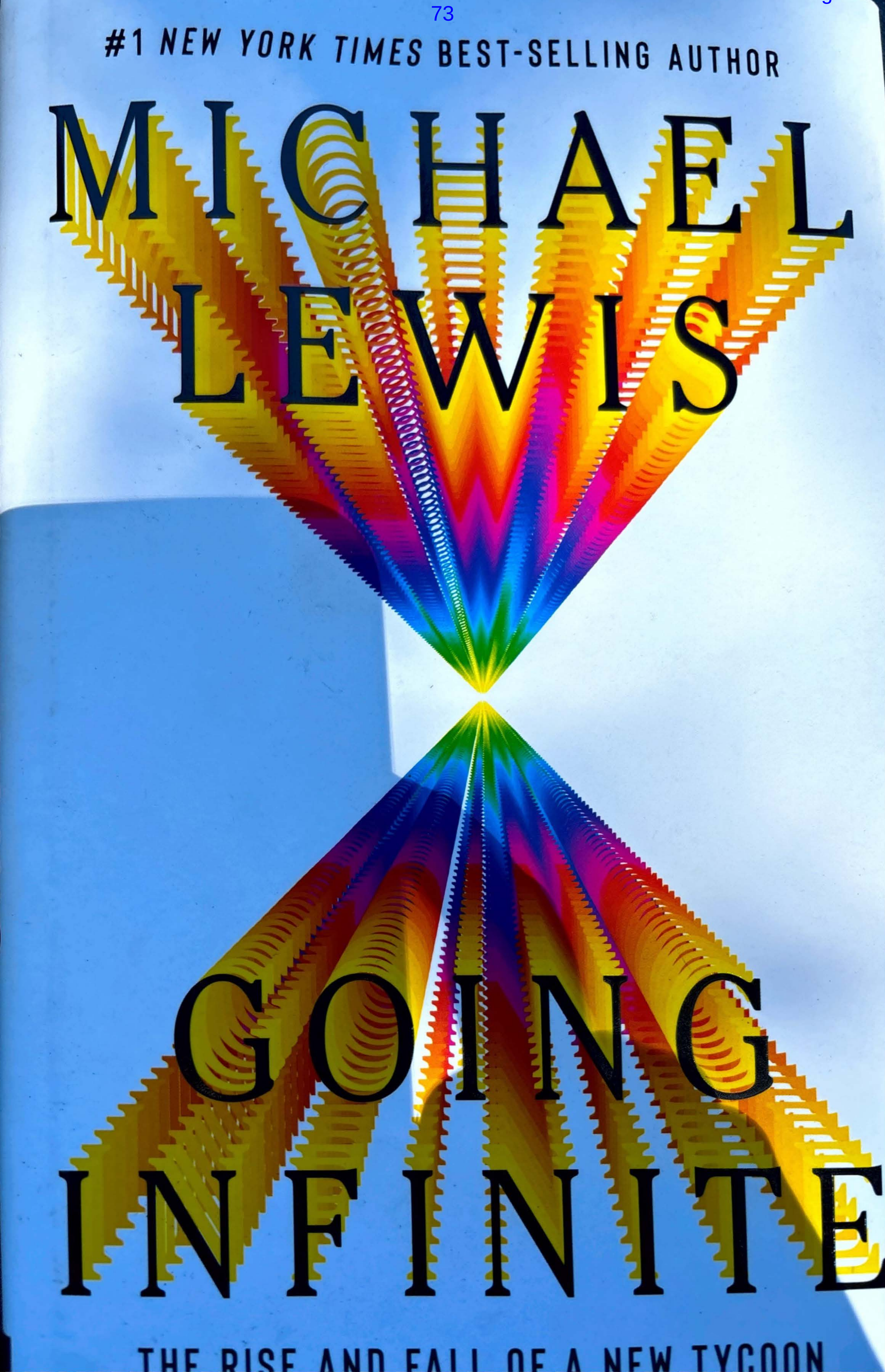
Bitcoin BTC/USD price history up until May 19, 2024

Published by Raynor de Best, May 20, 2024

Bitcoin (BTC) price again reached an all-time high in 2024, as values exceeded over 73,000 USD in March 2024. That particular price hike was connected to the approval of Bitcoin ETFs in the United States, whilst previous hikes in 2021 were due to events involving Tesla and Coinbase, respectively. Tesla's announcement in March 2021 that it had acquired 1.5 billion U.S. dollars' worth of the digital coin, for example, as well as the IPO of the U.S.' biggest crypto exchange fueled mass interest. The market was noticably different by the end of 2022, however, with

EXHIBIT 25


#1 NEW YORK TIMES BEST-SELLING AUTHOR
MICHAEL LEWIS
GOING INFINITE
THE RISE AND FALL OF A NEW TYCOON

ISBN 978-1-324-07433-5 U.S. $30.00
CAN. $40.00

From the #1 best-selling author of *The Big Short* and *Flash Boys*, the story of FTX's spectacular collapse and the enigmatic founder at its center.

WHEN MICHAEL LEWIS FIRST MET HIM, Sam Bankman-Fried was crypto's Gatsby and, according to *Forbes*, the richest person in the world under 30. CEOs, celebrities, and leaders of small countries all vied for his time and cash after he catapulted, practically overnight, onto the *Forbes* billionaires list.

Bankman-Fried's financial goal? *Infinity dollars*. As he told Lewis on a Berkeley Hills hike, he'd earmarked the cash to solve earth's biggest existential risks, like nuclear war, pandemics, and artificial intelligence turning on mankind. On a more modest level, he toyed with wiping out the national debt of the Bahamas.

Lewis hadn't imagined that this unkempt billionaire would be his next subject. Instead, he was meeting Bankman-Fried as a favor to a friend. But by the end of their walk, Lewis was deeply curious about FTX's founder. Who was this rumpled guy in cargo shorts and limp white socks, whose eyes twitched across Zoom meetings as he played video games on the side? Lewis decided to find out. "I don't know what's going to happen to you," Lewis said, "but I just want to watch."

In *Going Infinite*, Lewis captures the psychology of a figure who defines an era. For more than a year, Lewis had unparalleled access to Bankman-Fried. He was a fly on the wall during Bankman-Fried's frenetic rise, watching him amass a $22.5 billion fortune in record time. He also

(CONTINUED ON BACK FLAP)

GOING INFINITE

ALSO BY MICHAEL LEWIS

The Premonition
The Fifth Risk
The Undoing Project
Flash Boys
Boomerang
The Big Short
Home Game
The Blind Side
Coach
Moneyball
Next
The New New Thing
Losers
Pacific Rift
The Money Culture
Liar's Poker

EDITED BY MICHAEL LEWIS

Panic

AUDIBLE ORIGINALS

Playing to Win
The Coming Storm

MICHAEL LEWIS

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IN MEMORY OF DIXIE LEE LEWIS

YOU REMAIN INSIDE OF ME

The infinite is nowhere to be found in reality, no matter what experiences, observations, and knowledge are appealed to. Can thought about things be so much different from things? Can thinking processes be so unlike the actual processes of things? In short, can thought be so far removed from reality?

—David Hilbert, German mathematician (1862–1943)

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10 MANFRED 211

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exchanges themselves routinely lost their customers' money. Implausible because of who Sam was, and how he related to people. He had no clue how to engage with ordinary people in the way ordinary people needed engaging with, when you ran an exchange. To create a successful exchange, you needed to attract a crowd; you needed to relate to a mass audience. You needed *customers*. And you only got them if they trusted you. And they only trusted you if they knew who you were or thought they did. Sam wasn't sure his own colleagues knew who he was, which was why he was writing memos to explain it.

Plus he'd already tried and failed to do it. Back in May 2018, in Berkeley, Sam had asked Gary Wang to write the code for a bitcoin exchange, and within a month Gary had done it. CryptonBTC, it was called. They put it out on the web without any idea how to attract attention to it. No one showed up to trade on it. It was as if it had never happened. The code Gary had written for the first exchange had been sweet, however. From the total nothingness that had been CryptonBTC, Sam had learned that if he asked Gary to create a crypto futures exchange, he could do it in a month, and it would be more reliable and less risky for its users than any existing exchange. Gary was a genius.

In Hong Kong, Sam and his small team began to pitch the billionaire founders of existing exchanges on the idea of paying Alameda Research (Gary) to create a crypto exchange, different in important ways from any that existed. Alameda would supply the technology; the existing exchanges would supply the customers, and the trust. The most likely buyer, and the person to whom Sam himself pitched the idea, was CZ.

CZ was Changpeng Zhao, CEO of the crypto exchange Binance. Born in Jiangsu province, he was raised, from adolescence, in Canada, and educated there, returning eventually to China, with Canadian citizenship. He'd run through some ordinary jobs on the fringes of high finance—including a stint as a developer at Bloomberg—before landing as the chief technology officer at OKCoin. He'd left OKCoin in 2015 and created Binance in 2017; two years later, he was being described in industry publications as "the most powerful

would accept them. In these woods, CZ was the biggest bear and Sam seemed to be going out of his way to poke him. Dubai was tiny, Houston with sheikhs. Sam's bid to turn CZ into a homeless fugitive was bound to get back to him. And yet Sam didn't leave it at that. On October 30, when he returned to the Bahamas he tweeted a joke about CZ's inability to shape US crypto regulations. "Uh, he is still allowed to go to DC, right?"

Three days later, on November 2, the crypto news site CoinDesk published an article about a curious document that appeared to have been leaked to them by someone inside Alameda Research, or perhaps someone who lent money to Alameda Research. It wasn't a formal balance sheet. There was no sign that it had been audited, or that it presented a complete picture of the contents of Alameda Research, or that it was even real. It listed $14.6 billion of assets and $8 billion of liabilities that were supposedly inside of Alameda Research as of June 30, 2022. What the CoinDesk piece wanted to highlight was that more than a third of the assets were FTT, the token FTX had issued three years earlier.

In and of itself the article struck people inside FTX as of no more than prurient interest.* Everyone noticed that one of its contributors was the current girlfriend of Eric Mannes, Caroline Ellison's former boyfriend at Jane Street. The previous month, the couple had visited the Bahamas and stayed with employees of Alameda Research at Albany: Had the leak somehow originated inside the company? There was also the frisson that came with catching even a glimpse of the dragon's hoard. But the piece did not alarm or even surprise anyone at FTX. FTT was, in effect, equity in FTX—it had a claim on the first third of FTX's revenues. FTX had generated a billion dollars

* Even informed outsiders were not all that surprised. Steve Ehrlich, the *Forbes* reporter who had been assigned to determine Sam's wealth, said that he said to himself when he saw the piece, Congratulations on knowing something we knew two years ago.

"It was self-fulfilling. The fact that we took a big position was part of what caused it to go up."

There was more like this in Sam's dragon's lair. Alameda had also hoovered up about half the existing FTT tokens, for instance, creating, in effect, a second stake in FTX for Sam, with a claim on about one-sixth of all FTX's revenues. In the past eighteen months, FTT's price had risen from roughly $3 to roughly $80. Again, it was hard to say how much Sam could unload FTT for, had he tried to sell his stake all at once. But the crypto lenders were happy to lend him billions of dollars against his FTT, so, to get his hands on cash, he didn't need to sell it.

Then there was Sam's equity stake in FTX, which was very real indeed. A large number of venture capitalists had paid $2.3 billion for a mere 6 percent of it. Sam had good reason to believe that he might now sell an even smaller piece for several billion more to an even bigger group. FTX underpinned his growing empire: a real business with booming revenues and profits. It hadn't even really needed venture capital. (As if to make the point, Sam, having taken $200 million from Sequoia Capital in exchange for a piece of FTX, turned around and invested $200 million from Alameda Research in one of Sequoia's funds.) FTX was now the world's fastest-growing crypto exchange, and the casino of choice for big professional traders. In less than three years, it had gone from 0 to 10 percent of all crypto trading. In 2021, it would generate $1 billion in revenues.

And yet it still obviously had lots of room to grow. Its biggest rival, Binance, had five times the trading volume of FTX, which meant that it likely had roughly five times FTX's revenues and five times FTX's market value. The experts who tried to determine the present value of rich people had trouble putting a number on CZ's. No one was sure how much of Binance CZ actually owned. In 2021, *Forbes* had listed CZ's wealth as less than Sam's, but neither Sam nor anyone else inside FTX believed the numbers. Sam thought CZ might be the richest person in the world. And CZ, to the people who supplied Sam with capital, seemed vulnerable. When *Forbes* looked at Sam in the

never expressed it, and he seemed to feel his way to his decisions. Sam thought about the size of the pie, while CZ cared more about the size of his piece. Sam was gunning to build an exchange for big institutional crypto traders; CZ was all about pitching to retail and the little guy. Sam hated conflict and so was almost weirdly quick to forget grievances; CZ thrived on conflict and nurtured the emotions that led to it. CZ had a complex web of allies and enemies. In the pitch book he created to launch Binance back in 2017, much of what he listed as his qualifications for the task were social alliances with other crypto insiders. (Zane Tackett among them. In a brief biography, CZ described Zane, oddly, in relation to himself, saying that to Zane he played the role of "mentor and good friend.") Sam had no real social alliances at all. In his interactions with CZ, had he not trotted out his learned facial expressions, he would have spent a lot of time staring blankly while CZ spoke. "CZ sort of just says things," said Sam. "They aren't dumb. They aren't smart. I didn't have much of a sense of him until he had to make decisions."

The first decision CZ had to make was whether to pay Sam the $40 million he was asking for his cleverly designed futures exchange. After thinking it over for a few weeks in March 2019, CZ decided no—and then told his people to create a futures exchange on their own. Which struck Sam as such an ordinary and vaguely disappointing thing to do. "He's kind of a douche but not worse than a douche," said Sam. "He *should* be a great character but he's not."

Only after CZ turned him down did Sam decide to create an exchange himself. The idea was simple: the first crypto futures exchange that was well enough designed that it would serve the needs not just of crypto people but also of big professional traders, like Jane Street. Still, Sam was deeply uneasy about it. "We were going to build a product that is better than any product out there," he said. "If it works it is worth billions of dollars, but I thought there was a better than fifty percent chance it wouldn't work. I'd never done marketing. I'd never talked to media. I'd never had customers. It was just different from anything that I'd ever done." And so he started grabbing people who might do the things he didn't know how to do. People

and to make them feel comfortable with him—which at that moment they were not. "Sam forgets how many people thought he was a scammer at first," said Ryan. "You'd expect to find a Sam behind any scam."

Sam did have one thing going for him, socially, with other crypto people. The higher crypto prices rose, the greater the flood into crypto of sober-minded people in suits that people like Zane found insufferable. Ryan might have counted as one such person, but Ryan was not sober-minded, so he got a pass. The Goldman guys and the venture capitalists and the corporate lawyers turned crypto bros—they were all part of this invasion of conventional people who wanted to make fast money without the kookiness that had made the fast money possible. The pseuds would seek common ground with the original crypto religionists by exhibiting their excitement about the technology. The blockchain! *The blockchain is going to change . . . everything,* they'd say, and hope that would suffice. A religion based on hating banks and government and any sort of institutional authority—well, for the pseuds, that was usually taking things too far.

The crypto religionists, the people who had been drawn to the cause for their own reasons, had, at best, mixed feelings about the people who came to it later, and just for the money. About Sam, Ryan thought, they might be a bit more inclined to suspend judgment. Sam shared an important trait with the crypto religionists: a dissatisfaction with the world as he found it. He did not have any particular hostility toward governments or banks. He just thought grown-ups were pointless.

Ryan was less a grown-up than the highest expression of a new species, the crypto bro, that Sam sensed he needed on hand. He hired Ryan without being totally sure what Ryan would do. "The job description was sort of *make it all better,*" said Ryan.

To create a crypto exchange, Sam needed crypto people, but he also needed money to pay the crypto people. The normal, old-fashioned way to get it would be to go hat in hand to family and friends, or to raise the money from venture capitalists. Sam didn't have any friends with the kind of money he needed, and he didn't know any venture capitalists. What he had was a token. It belonged to the same general

women and lasers and loud booming music," he wrote in his journal afterward, "but there was an odd microclimate that seemed to follow me around as I wandered between the tables. It didn't start to crystallize until I walked by CZ a few . . . times and each time he broke eye contact with his eye candy and embraced me: *people were thinking about us, a lot.* This was the first time CZ seemed more interested in me than I was in him."

Out of thin air FTX minted three hundred fifty million FTT tokens. Sam offered a chunk of them to employees at five cents each, and another chunk to important crypto people, like CZ, who might be friends of the exchange, at ten cents. CZ initially declined, as did most of FTX's own employees—Ryan Salame was a big exception—but other outside investors bought up enough that Sam eventually raised the price, first to twenty cents and then to seventy. On July 29, 2019, FTT was listed on FTX and thus offered to the general public. ("That was the most nervous I'd ever seen Sam," said Nishad.) It opened at $1 and traded up to $1.50. Inside two months, Ryan Salame had made thirty times his money, and the outside buyers had made fifteen times their money. Of the original three hundred fifty million tokens minted, FTX had sold roughly sixty million at about a dollar less than they were now worth. Within a week or so, Sam's doubts about his ability to earn the trust of a mass audience had turned to regret for selling FTT way too cheap. Just how cheap became clear when, a few weeks later, CZ called Sam and offered to buy a 20 percent stake in FTX for $80 million.

It was as if a wildcatter had accidentally built his house on an oil field: Sam hadn't even really wanted to run a crypto exchange. He'd built a casino that offered gamblers the chance to make bets bigger than their bank accounts justified, at seemingly no risk to the casino or to the other gamblers, and it was exactly what the crypto world wanted. His timing, though accidental, was perfect, as big professional traders like Jane Street were entering the crypto markets and in need of a professional-grade futures exchange. Sam's choice of location, also accidental, was perfect too: Hong Kong was maybe the only spot in the world where he and CZ would both feel at ease.

family as the thousands of other crypto coins that had been created since 2017 and shilled to the public. The FTX token was called FTT.

The most important feature of FTT was that its holders were collectively entitled to roughly a third of the annual revenues of the FTX exchange. Of the $1 billion in revenues the exchange generated in 2021, for example, $333 million would be set aside to "buy back and burn" FTT. FTX would remove tokens from circulation in the same way that a public company bought back its shares, and thus raise the value of all remaining shares. FTT was not merely like stock in FTX, it *was* stock in FTX—and even came with voting rights on certain decisions made inside the company. As it gave you a share of the gross, rather than the net, it was arguably even more valuable than the stock. "The crypto people would say, Why would I want your equity? I'd rather just buy the token," said Sam. "The venture capitalists would say, What's a token?"

One hitch to the tokens was that they were illegal to sell inside the United States. The explosion of new crypto tokens had spawned a new game of cat and mouse, between token creators and securities regulators. The world's most aggressive securities regulator, the US Securities and Exchange Commission, now devoted a meaningful amount of energy to arguing that a lot of these tokens were securities (which they obviously were), and so a threat to American investors, and banned from the US unless they first won SEC approval (which seemed highly unlikely). Crypto exchanges and token creators who wanted to sell to Americans insisted that these tokens weren't securities but more like, say, Starbucks Rewards points. As FTX was incorporated in Antigua, operated in Hong Kong, and in principle did not allow American investors to trade on its crypto exchange, and in principle did not sell its tokens to Americans, it was beyond the reach of the SEC.

At any rate, the buyers of the FTT would either be foreigners, or Americans living outside the country. And now that was who Sam was courting, in his own awkward way. Three weeks before he offered FTT to the public, he flew to a conference in Taipei. All the big crypto players turned up at a party thrown by one of the biggest exchanges. And so, mechanically, did Sam. "Tonight was a night about booze and

women and lasers and loud booming music," he wrote in his journal afterward, "but there was an odd microclimate that seemed to follow me around as I wandered between the tables. It didn't start to crystallize until I walked by CZ a few . . . times and each time he broke eye contact with his eye candy and embraced me: *people were thinking about us, a lot.* This was the first time CZ seemed more interested in me than I was in him."

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check out the place he found himself meeting with the newly elected prime minister. "Sam, we're broke," he'd confessed.

Sam wasn't broke. Just then Sam was the opposite of broke. Alameda Research was no longer paying loan shark interest rates to borrow tens of millions of dollars from effective altruists. The new crypto lenders like Celsius and Genesis were willing to hand Alameda Research collectively between $10 billion and $15 billion at rates as low as 6 percent. The rate of return inside Alameda was steadily declining, but with access to vast amounts of cheap capital, its raw trading profits kept rising: from $50 million in 2018, to $100 million in 2019, to $1 billion in 2020 and again in 2021. And those were just the trading profits; the numbers didn't include the seemingly vast unrealized gains on Sam's token stashes.

In March 2020, a Silicon Valley engineer named Anatoly Yakovenko launched a new and better blockchain that offered a solution to maybe Bitcoin's biggest weakness as a means of exchange: it was way too slow. Bitcoin could only validate seven transactions a second. The new Solana blockchain promised to process up to sixty-five thousand transactions a second. Sam had no independent ability to evaluate the thing, but he asked people who did and soon decided that Solana might be the crypto of the future. Even if it wasn't, Solana's story was good enough that other people might see it that way and drive up the price of its token. Eighteen months later, Alameda owned roughly 15 percent of all Solana tokens, most purchased at twenty-five cents apiece. The market price of Solana had gone as high as $249, a thousand-times increase on what Sam had paid for the tokens, and the face value of Sam's entire stash was roughly $12 billion. It was hard to know the resale value of such a huge stake. But there was a real market for Solana tokens. Two billion dollars' worth of the things traded each day. "I watched it in wonder," said Sam.

Solana was a microcosm of everything else Sam touched at that moment. It had a story that Sam amplified, by embracing the story. "It was the most complete proof we ever found of the hypothesis that we could have an insanely large edge on things like this," he said.

"It was self-fulfilling. The fact that we took a big position was part of what caused it to go up."

There was more like this in Sam's dragon's lair. Alameda had also hoovered up about half the existing FTT tokens, for instance, creating, in effect, a second stake in FTX for Sam, with a claim on about one-sixth of all FTX's revenues. In the past eighteen months, FTT's price had risen from roughly $3 to roughly $80. Again, it was hard to say how much Sam could unload FTT for, had he tried to sell his stake all at once. But the crypto lenders were happy to lend him billions of dollars against his FTT, so, to get his hands on cash, he didn't need to sell it.

Then there was Sam's equity stake in FTX, which was very real indeed. A large number of venture capitalists had paid $2.3 billion for a mere 6 percent of it. Sam had good reason to believe that he might now sell an even smaller piece for several billion more to an even bigger group. FTX underpinned his growing empire: a real business with booming revenues and profits. It hadn't even really needed venture capital. (As if to make the point, Sam, having taken $200 million from Sequoia Capital in exchange for a piece of FTX, turned around and invested $200 million from Alameda Research in one of Sequoia's funds.) FTX was now the world's fastest-growing crypto exchange, and the casino of choice for big professional traders. In less than three years, it had gone from 0 to 10 percent of all crypto trading. In 2021, it would generate $1 billion in revenues.

And yet it still obviously had lots of room to grow. Its biggest rival, Binance, had five times the trading volume of FTX, which meant that it likely had roughly five times FTX's revenues and five times FTX's market value. The experts who tried to determine the present value of rich people had trouble putting a number on CZ's. No one was sure how much of Binance CZ actually owned. In 2021, *Forbes* had listed CZ's wealth as less than Sam's, but neither Sam nor anyone else inside FTX believed the numbers. Sam thought CZ might be the richest person in the world. And CZ, to the people who supplied Sam with capital, seemed vulnerable. When *Forbes* looked at Sam in the

fall of 2021, they saw the richest person in the world under the age o thirty. When the VCs looked at Sam, they saw the guy who might ver soon replace CZ as the richest person in the world, period.

All of that explained what Sam was about to do at this moment— and what would later feel a lot harder to explain or even to believe. He set out to establish FTX as the world's most regulated, most law-abiding, most rule-following crypto exchange. To acquire as many licenses to allow him to operate legally and openly in as many countries as he could. To make a bet on the rule of law shaping the lawless crypto markets. By the end of 2021, 16 percent of Americans claimed to have dabbled in crypto. Across Asia the numbers were likely bigger. It was only a matter of time, Sam thought, before regulators engaged with crypto and banished the unlicensed exchanges.

The strategy was something like the opposite of Binance's. When FTX launched, in May 2019, Binance was merely one of a handful of crypto exchanges with roughly the same market share, of roughly 10 percent. One of those, BitMEX, soon ran afoul of the US Department of Justice, for "willfully failing to establish, implement and maintain an anti-money laundering program," and its founders, two American and one British, were variously fined, given probation, and placed under house arrest. Two other exchanges, OKEx and Huobi, reportedly watched executives being hauled off by the Chinese police, and saw their assets frozen. CZ had left China three years earlier, in late 2017, before that year's government crackdown, one of several before and after. He'd landed first in Singapore but finally settled in Dubai, which, among its charms, had no extradition treaty with the United States. Which was useful, as CZ's first response to new rules and regulations was often to ignore them, and count on the regulators to lack the nerve or the resources to take action.

That had been the smart thing to do, so far. In two years, Binance's share of crypto trading had boomed, from 10 percent to 50 percent. It offered financial products that local regulators either had banned or had yet to approve, and the regulators did not seem willing to do much about it. Binance's own exchange token, called BNB, was an example. BNB was to Binance what FTT was to FTX: a claim on the

revenues of the enterprise. You could make a reasonable argument that bitcoin wasn't a security and the Commodity Futures Trading Commission had made it, and declared it a commodity. There was no similar argument to make for BNB or FTT. They'd been created and sold to investors to raise money for profit-making enterprises. They paid dividends to their owners, in the form of lower fees on the exchange and the buyback-and-burn agreements. There was no definition of a security that they didn't meet. If you tried to sell them to American investors inside the United States, it was hard to imagine the Securities and Exchange Commission simply turning a blind eye. And yet Binance sold BNB—and much else—to Americans inside the United States. In the immortal words texted by Binance's *chief compliance officer* to a colleague in 2018: "we are operating as a fking unlicensed securities exchange in the USA bro." (This and other similar morsels turned up in a lawsuit filed by the SEC against Binance five years after the fact, in June 2023.)

In their willingness to court the wrath of US financial regulators, the crypto exchanges fell into one of at least four categories. A small group of tiny US exchanges listed only bitcoin and ether, the two oldest coins, blessed by the SEC as commodities and openly regulated by the CFTC. (A bit oddly, the older the coin, the more people thought of it as a commodity.) FTX's new US exchange listed those two coins, plus maybe eighteen other, newer ones, none of which had the most obvious properties of a security. None of them had buyback-and-burn features, for example, or were solely intended to raise money for some for-profit enterprise. Coinbase, the exchange that serviced the greatest number of US customers, appeared willing to take more regulatory risk. It listed roughly five hundred coins, including some that the SEC pretty clearly viewed as securities, and its CEO, Brian Armstrong, took to Twitter to criticize the regulators for "sketchy behavior." Coinbase itself had no exchange token akin to FTT, however, and so wasn't in the most brazen position of using its exchange to sell its own unregulated securities to US investors. Only Binance did that, with BNB.

Selling what were in effect shares in itself to US retail investors on

its own new US crypto exchange, Binance lifted the biggest middle finger to the US regulators. In the bargain, it juiced the value of BNB incredibly. When Binance formally opened its US exchange, in September 2019, the market cap of BNB was a bit shy of $3 billion. By the fall of 2021, it topped $100 billion. How much of the rise was driven by demand from US investors was hard to guess, but Sam guessed anyway: $20 billion. The ire of US regulators seemed, by comparison, a small price to pay.

Which is why, when Sam took in the situation, he decided that Binance's strategy was unsustainable. That the smart thing to do was to be the world's most law-abiding and regulator-loving exchange. FTX could use the law, and the regulators, to drive crypto trading from Binance and onto FTX. If countries did not yet have the laws, a small army of FTX lawyers would help them to create them. In the country that mattered most—the one country whose financial regulators chased people outside of their borders, and enforced its rules around the globe—Sam would personally take the lead. He'd set out to persuade the United States government to regulate crypto and punish those who violated the new rules, leaving FTX alone as a kind of teacher's pet of crypto. (Maybe the best thing about the Bahamas, from Sam's point of view, was how close it was to the United States.)

The US was now, in Sam's mind, the holy grail. It had an incumbent crypto exchange, Coinbase. But Coinbase's CEO had already written insulting tweets about the SEC. And Coinbase, compared to FTX, was a boring and bloated casino. It had *fifteen times* the number of employees FTX did, and only about a fifth of FTX's volume. Charging retail investors fees between five and fifty times what FTX charged, it was still running big losses. Even so, it was a public company, with a market capitalization of more than $75 billion. If FTX was granted a license to offer crypto futures in the United States and was given full access to US investors, it might steal Coinbase's customers, along with its market cap. Or so Sam thought—which is why

he also thought that the license might double or even triple FTX's value overnight.

Before he could do any of this, he needed to get rid of CZ. CZ still owned the stake in FTX that he had bought in late 2019 for $80 million. Relations between Binance and FTX had since deteriorated into simmering resentment. Binance was the class bully, FTX the class nerd, and each took pleasure in using its special powers to torment the other. The Binance futures launch was a case in point. It had taken the Binance internal team three months longer to create their crypto futures trading platform than it had taken Gary, working by himself, to create FTX's. Once it was up and running, it attracted little interest. Or, rather, as Sam instantly noticed, what trading there was in Binance's new futures contract was fishy: instead of the spasmodic flows of naturally occurring market activity, there was a regular tick, tick, tick of trades. He guessed that Binance had created bots to trade its new contract with itself, to create the illusion of activity.

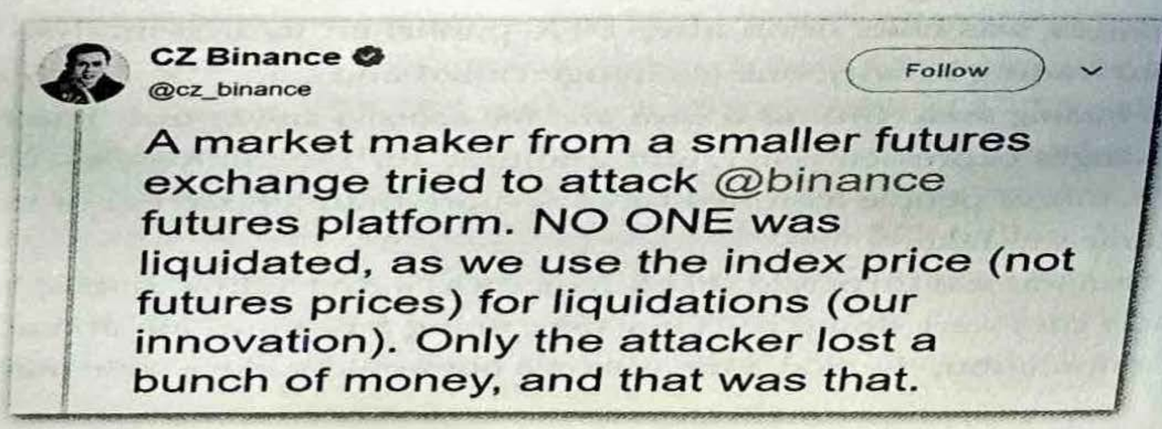
Wash trading, as it was called, would have been illegal on a regulated US exchange, though the sight of it did not bother Sam all that much. He thought it was sort of funny just how brazenly many of the Asian exchanges did it. In the summer of 2019, FTX created and published a daily analysis of the activity on other exchanges. It estimated that 80 percent or more of the volume on the second- and third-tier exchanges, and 30 percent of the volume on the top few exchanges, was fake. Soon after FTX published its first analysis of crypto trading activity, one exchange called and said, *We're firing our wash trading team. Give us a week and the volumes will be real.* The top exchanges expressed relief, and gratitude for the analysis, as, until then, lots of people assumed that far more than 30 percent of their volume was fake.

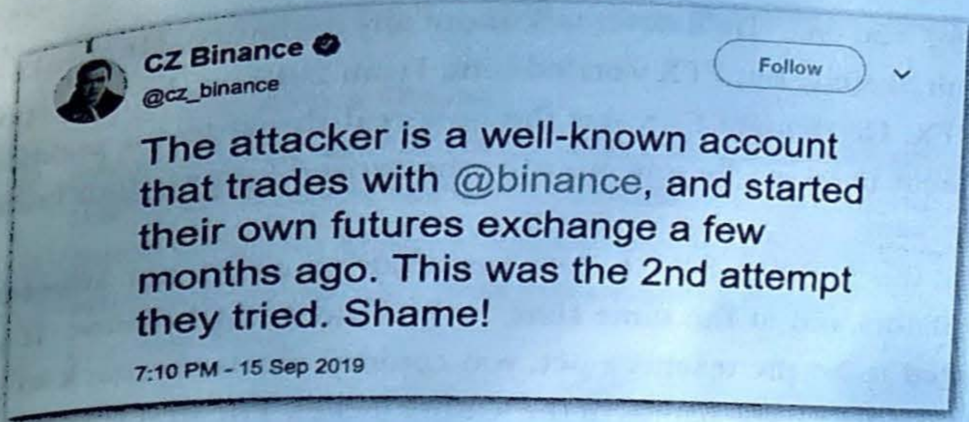
Sam was less surprised that Binance was wash trading than by how badly they were doing it. "They were doing a B-minus job at market manipulation," he said. One Binance bot would make a wide market

in Bitcoin futures, and another Binance bot would enter and lift its high offer. If, to keep the numbers simple, the fair value of bitcoin was $100, the first Binance bot would insert a bid at $98 and an offer at $102. No normal trader would trade against either—why sell for $98 or buy for $102 on Binance what you could buy or sell on some other exchange for $100? But then, at regular and predictable intervals, the second Binance bot would enter the market and buy at $102. It looked as if a trade had occurred between two different parties, but it hadn't. It was simply Binance buying from Binance.

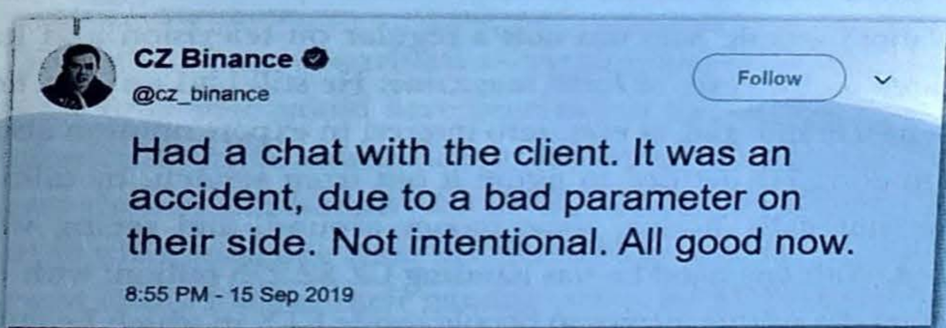
Sam loved this sort of thing: it was Jane Street trading all over again. In response, he had his traders at Alameda Research build their own, faster bots. Alameda's bots inserted offers a tiny bit cheaper than the offers from Binance bots. The Binance bot would offer to sell a Bitcoin future at $102, and, moments before the second Binance bot showed up to buy, the Alameda bot would leap in and offer it at $101.95. Instead of buying bitcoin from itself at an inflated price, Binance was buying it from Alameda Research at a price nearly as high.

Selling to Binance bots for $101.95 what they could buy elsewhere at $100 was found money for Alameda. But then the futures team inside Binance began to notice that their wash trading was losing money—and complained to CZ. That they hadn't told CZ the full story, or that they had not fully grasped what had happened, was evident in CZ's confusing response:





"It was very Chinese not just calling me up and saying, 'Hey, can you stop?'" said Sam. After that he'd called Binance's chief financial officer, Wei Zhou. It was a weird conversation—the CEO of one crypto exchange calling the CFO of another to inform him that, if he didn't want to lose money on his new futures contract, he'd need to improve his market manipulation. Wei Zhou spoke to CZ, who called Sam for a brief though not unfriendly chat, after which Sam concluded that CZ still had not been told by his traders what had actually happened. Whatever he'd been told led him to tweet a retraction that didn't make much more sense than what he'd originally written:



In the first eighteen months of FTX's existence, there had been several other dustups with Binance of this sort. CZ developed what three of his employees at the time described as an obsession with his new rival. He'd ask staff for regular reports about FTX, and speak of FTX in ways he would not of the other exchanges. "CZ is super

astute," said one. "He'll never talk about any exchange. He thin free marketing. But FTX worried him. From 2019 on, he only s of FTX. He thought FTX was the only real threat to his positi A threat in which he was, weirdly, the second-largest sharehold after Sam.

By the middle of 2021, Sam saw that he could not sweet-talk regulators and at the same time have CZ as a big investor. If you wanted to be the teacher's pet, you couldn't sit in the back of the classroom with the badass in the leather jacket. The first thing every regulator asked for was a list of your investors, and personal details about them. "They were asking CZ what his family situation was and where he lives, and CZ didn't want to say," said one former Binance employee. In the end, Sam told CZ that he wanted to buy him out of his FTX shares. For the stake he'd paid $80 million to acquire, CZ demanded $2.2 billion. Sam agreed to pay it. Just before they signed the deal, CZ insisted, for no particular reason, on an extra $75 million. Sam paid that, too. Whatever gratitude CZ felt about his two-billion-dollar windfall he hid. "From then it was a cold war," said Sam.

The buyout of CZ occurred against a backdrop of the bigger public relations assault. Sam was now a regular on television and had appeared on the cover of *Forbes* magazine. He still had no idea how to create a brand, and, as ever, zero interest in expert opinion about how to do it. He decided to figure it out from scratch, by talking it over internally, hurling some money around, and seeing what worked. With one hand he was handing CZ $2.275 billion; with the other he was writing memos to people inside FTX in which he ruminated, as might a Martian, on what caused ordinary Americans to like and trust a product. "We're currently ahead in tech and favorability ratings, and behind in name recognition," he wrote. "We need to get 50m low engagement users to decide to switch from Coinbase to FTX. This will take a fairly forceful nudge!"

He began by noting how few marketing campaigns had had the effect that he hoped to achieve with FTX's. He counted only three:

1. Yes we can: Barack Obama
2. Just do it: Nike. Lots of athletes but there are two who made the brand what it is: Michael Jordan and Tiger Woods
3. Think different: Apple. Albert Einstein, John Lennon, MLK, Muhammad Ali, Rosa Parks, Gandhi, Alfred Hitchcock etc.

The crypto crowd was overwhelmingly young and male, and so it seemed obvious to use sports celebrities to win their love and trust. But even within the narrow world of sports, what people paid attention to struck Sam as arbitrary. For example, in the United States, everyone knew and cared about the names of the companies on their stadiums, but no one knew or cared about the names of the companies on their players' jerseys. There was no rule of human behavior that made this so: in Europe everyone knew and cared about the names on the players' jerseys but not about the corporation the stadium was named for. There was no moment at which Americans had agreed on the importance of the stadium sponsors: it had just somehow happened. "And once everyone agrees on what matters, it gets repeated," said Sam.

The initial general wariness of crypto money made it a bit trickier than it otherwise would have been to buy the naming rights for a professional sports arena. FTX tried and failed to sponsor the stadiums used by the Kansas City Chiefs and the New Orleans Saints. And so when someone from the Miami Heat reached out to them to suggest that FTX buy their naming rights, for $155 million for the next nineteen years, Sam leapt at the chance. That the deal required the approval not just of the NBA but also of the Miami-Dade Board of County Commissioners, a government body, was a bonus. After that, they could point to a government entity that had blessed FTX.

least $8 billion belonging to crypto traders, and meant to be safe a sound inside FTX, had wound up instead inside Alameda Researc What had become of the $8 billion was not entirely clear, but wasn't good. Natalie had wept when she'd learned that, as she pu it, "there was a button on FTX. Alameda could take whatever risk it wanted to." Like most FTX employees, she'd kept her money on the exchange. Now it was all gone. Like most FTX employees, she felt as if she'd been living a dream. Already the dream was growing fuzzy and requiring effort to recall. Could it really be true that she'd been next-door neighbors with Vince Carter?

Between Sunday and Wednesday, the inner circle of effective altruists had been holed up in Sam's sleeping quarters, trying and failing to save the company. Natalie now had only a vague sense of their whereabouts or states of mind. On Wednesday, George Lerner had determined that Nishad was a suicide risk and arranged for him to be escorted out of the country and to his parents, in San Francisco. As the company collapsed, Caroline had been traveling in Asia and had remained there in an odd mood. She struck her psychiatrist, and others to whom she had spoken, as somewhere between relieved and happy. She too was now rumored to be heading back to her parents' house, in the Boston area. Gary was as silent as ever and impossible to read but apparently still around. And Sam—well, Natalie didn't know what, if anything, Sam was actually feeling, or even where he was. Tracking Sam was no longer her job.

The road from the airport to the Albany resort passed FTX's offices. Natalie was uneasy about me trying to see them. She feared they might contain the people repossessing the company cars. Still, as we approached, we slowed. The guard booth was empty. The barrier was down but blocked as little of the road as ever. There was no sign of life on the field of asphalt; the cars were gone; the jungle huts seemed entirely abandoned. Then, on the far side of the lot, a figure rounded a hut and came into focus. It was Sam, all by himself, in a bright red T-shirt and shorts. Walking circles around his former empire. Even at a distance, you could tell he could use a shower and

a shave. He walked over and climbed into the car, as if he'd been expecting us. He needed a ride home, which of course raised the question of how, and why, he'd come to be here in the first place.

"You know what's weird to think about?" he said, as we left the office behind. "Saturday. Saturday everything was normal."

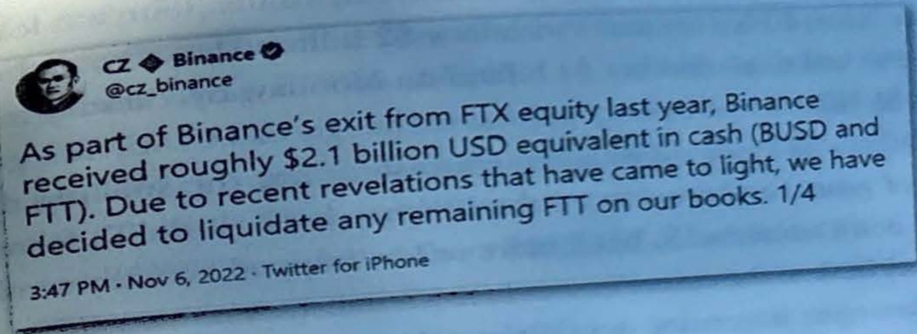
I did my best to reconstruct what had happened the previous few weeks, before reconsidering what had happened the previous few years. There'd been another dustup between Sam and CZ that, when it happened, had not seemed all that important. In late October, Sam had flown to the Middle East to raise money and, in the bargain, find a second home, in the Eastern Hemisphere, for FTX. On the evening of October 24, 2022, he bumped into CZ at a conference in Riyadh. It was the first time in nearly three years they'd been in the same room. They'd had a brief, awkward chat, only because it took less effort than not having it. "It was a five-minute conversation in which no real information was exchanged," said Sam. "It was like fake nice. We dispensed with our obligation to acknowledge we were both there." The next day, Sam had flown to Dubai to meet with its financial regulators. The regulators at the time hoped that FTX might make Dubai its Eastern Hemisphere headquarters. Sam later wrote up the message he'd tried to convey to them. "I love Dubai," he said.

> But we *can't* be in the same place as Binance. . . . This is for two reasons: first they are constantly devoting significant company resources to trying to hurt us; and second that they soil the reputation of wherever they are. I can't emphasize this enough: in general I hear great things from other jurisdictions/regulators etc. about Dubai and the UAE [United Arab Emirates], *except* that there's a constant refrain of: *that's the jurisdiction that accepted Binance, and so we don't trust their standards.*

It was unclear to Sam, if Dubai decided to rid itself of CZ and his exchange, whether any country in which CZ would be willing to live

in revenue in 2021 and, even with crypto prices crashing, was about to do it again in 2022. Sam's biggest regret, expressed repeatedly from the moment the price of FTT had rocketed back in 2019, was that he'd created and sold it in the first place. Ever since, he'd been vacuuming it up inside of Alameda Research.

On Sunday morning, November 6, CZ posted a tweet to his 7.3 million followers.


CZ Binance
@cz_binance

As part of Binance's exit from FTX equity last year, Binance received roughly $2.1 billion USD equivalent in cash (BUSD and FTT). Due to recent revelations that have came to light, we have decided to liquidate any remaining FTT on our books. 1/4

3:47 PM · Nov 6, 2022 · Twitter for iPhone

CZ still held the roughly $500 million worth of FTT that he had taken back in mid-2021 as part of his $2.275 billion buyout. (Most of the rest of his massive payout he'd taken in bitcoin and dollars, though he also took back roughly $400 million of the Binance token, BNB, that he'd used to buy his stake in the first place.) Sam hadn't thought much more about the tweet than he had about the CoinDesk article. On Saturday, November 5, he and his brother, Gabe, along with Ryan Salame, had met in Palm Beach with Florida governor Ron DeSantis. The meeting had no particular purpose. Like basically everyone else in US politics and finance, DeSantis wanted to meet Sam, and Sam was curious to know more about this person who might well one day ask him for money. "It was to figure out where he was on the scale from reasonable person to Trump," said Sam. "But I couldn't figure it out." After the meeting, he was scheduled to fly to Tampa to watch Tom Brady's Buccaneers play the Los Angeles Rams the following day. It turned out to be thrilling, with Brady leading yet another last-minute game-winning touchdown drive. Only Gabe and Ryan Sal-

ame watched it, however, as by then Sam was back in the Bahamas, to play the end of another game.

The run on FTX was in its own way spectacular. There had been $15 billion in customer deposits on the exchange. Or there was meant to be that amount, held in either fiat currency or bitcoin and ether. On a normal day, $50 million or so either came into or left the exchange. Each day between November 1 and November 5, $200 million fled. By late Sunday night, the sixth, $100 million was leaving every hour. FTX customers withdrew $2 billion that day, and then tried to withdraw another $4 billion on Monday. By Tuesday morning, $5 billion had exited, and the exchange was clearly not going to be able to come up with enough cash to pay the swelling number of customers who wanted their money back. It didn't formally shut down withdrawals, but it more or less stopped actually sending money back to the customers.

Even more interesting than the speed of the event were its inciting incidents. CZ's tweet had obviously been the first, but it wasn't the last, or maybe even the most important. Caroline had responded to CZ on Sunday morning.

Caroline
@carolinecapital

@cz_binance if you're looking to minimize the market impact on your FTT sales, Alameda will happily buy it all from you today at $22!

4:03 PM · Nov 6, 2022 · Twitter Web App

The tone—the peppy simplicity that obviously masked some other motive—sounded a lot like Sam. Caroline had actually written it. Neither she nor Sam expected CZ to accept the deal. CZ wanted to maximize the damage to FTX, and so would string out the uncertainty for as long as possible. The hope was that a concrete offer to buy at a certain price would shut him up and calm the market.

It did the opposite. A risk analysis company called Gauntlet, which studied the price movements of various crypto tokens, had maybe the best picture of what actually happened next. Within twenty seconds of Caroline's tweet came a rush to sell FTT by speculators who had borrowed money to buy it. The panic was driven by an assumption: if Alameda Research, the single biggest owner of FTT, was making a big show of being willing to buy a huge pile of it for $22, they must need for some reason to maintain the market price at $22. The most plausible explanation was that Alameda Research was using FTT as collateral to borrow dollars or bitcoin from others. "You don't tell someone a price level like $22 unless you have a lot of confidence that you need that price," the CEO of Gauntlet, Tarun Chitra, told Bloomberg News. By Monday night, the price of FTT had fallen from $22 to $7. The half a billion dollars of his own money that CZ had elected to incinerate was, in the grand scheme of things, such a trivial sum that hardly anyone paid it any more attention.

By Tuesday, the relevant math was fourth-grade level. Before the crisis, FTX was meant to be holding about $15 billion worth of customer deposits.* Five billion of that had already been paid out to customers, and so, still inside FTX, there should have been roughly $10 billion. There wasn't. The only remaining assets were whatever was left of the dragon's hoard inside of Alameda: a big pile of FTT, another big pile of Solana tokens, an assortment of crypto tokens that would be even harder to sell, $300 million worth of Bahamas real estate, and a truly massive heap of Sam's venture capital investments—including the stake in Twitter, which Sam had never

* I'm simplifying this, though only a tiny bit. FTX was a futures exchange, and so it lent money to its customers to make bets. At any given moment, it would not be expected to have all of its customers' money immediately on hand. But its chief selling point back in 2019 was that it had found a better way to evaluate the gambles of the customers to whom it lent money; and it had. And so it should not have been exposed to losses from its loans to customers.

even if Sam's Serum was worthless. The hunt had gone better than anyone without a very deep working knowledge of Sam's motives and methods could have expected. At the end of June 2023, John Ray filed a report on his various collections. "To date, the Debtors have recovered approximately $7 billion in liquid assets," he wrote, "and they anticipate additional recoveries." Seven point three billion, to be exact. That haul didn't include the Serum, or any large claw-backs, or the money stolen by the guy in Mauritius, or the stake in Anthropic, or most of the other private investments. An investor who was hoping to bid for the remaining portfolio told me that, if it was sold intelligently, it should go for at least $2 billion. That would raise the amount collected to $9.3 billion—even before anyone asked CZ for the $2.275 billion he'd taken out of FTX. Ray was inching toward an answer to the question I'd been asking from the day of the collapse: Where did all that money go? The answer was: nowhere. It was still there.

Caroline had been the first to plead guilty and take whatever deal the prosecutors had implicitly offered. Gary and Nishad soon followed. All sorts of people who had no idea exactly what had happened inside Sam's World now thought they knew all they needed to know. A surprising number of them thought the crime should have been obvious all along. It hadn't been. Hedge fund managers who had shorted the stocks of US banks that banked crypto routinely spread nasty rumors about the banks' crypto customers, like FTX, in an attempt to damage the banks. If any of these people had known the truth about FTX, they most certainly would have said it. They didn't. Even those who had expressed suspicion about Sam or FTX had failed to say the one simple thing you would say if you knew the secret they were hiding: *the customers' deposits that are supposed to be inside FTX are actually inside Alameda Research.*

The authorities in the Bahamas had jailed Sam and after a lot of the usual Sam-induced complications extradited him to the United States. In an indictment brought by the US attorney's office

for the Southern District of New York, the US Department of Justice charged Sam with various crimes and then allowed him to post $250 million bond as bail. Sam hadn't posted $250 million. Sam's parents had posted their home and assumed the risk that he would jump bail—in which case they would, in theory, owe $250 million to the US government. They didn't have $250 million. The prosecutors didn't mind; they seemed to care mainly that the press report that Sam Bankman-Fried was still in possession of at least $250 million. Once that happened, lots of people who should have known better but who'd fallen into the habit of speaking without thinking took to Twitter to say that Sam's ability to fork over $250 million made up their minds about his guilt. But most people hadn't waited even that long. "Your son is a dirty, filthy rotten typical criminal hooky-nosed selfish greedy jew," someone calling himself J. Revick had emailed Joe Bankman, the day FTX filed for bankruptcy. All the Bankman-Frieds received lots of messages like it. Joe had written back: "Isn't Revick a Jewish name?"

Mobs now gathered and sentiment now hardened more quickly than ever. From a distance, it was soon easy to make up one's mind about what had happened inside Sam's World, even before Sam had his day in court. From a distance, it became almost taboo to raise any doubts about the nature of Sam's crime.* Up close, it was hard not to have such doubts. The closer a person was to him, and to the business, the more questions they had about it. Zane Tackett, for instance, could not understand why, toward the end of 2021, Sam hadn't simply replaced the customers' deposits inside of Alameda Research with loans from the crypto banks. Back then, Alameda could have borrowed $25–$30 billion without much trouble. Why not take that money and move the $8.8 billion of customer money back into FTX, so that if Alameda blew up it would take the crypto banks, rather than FTX, with it? Ramnik had a different question.

* And basically no one did, with one fabulous exception: Kevin O'Leary. Say what you will about his influence, he's got some nerve.

fall of 2021, they saw the richest person in the world under the age of thirty. When the VCs looked at Sam, they saw the guy who might very soon replace CZ as the richest person in the world, period.

All of that explained what Sam was about to do at this moment—and what would later feel a lot harder to explain or even to believe. He set out to establish FTX as the world's most regulated, most law-abiding, most rule-following crypto exchange. To acquire as many licenses to allow him to operate legally and openly in as many countries as he could. To make a bet on the rule of law shaping the lawless crypto markets. By the end of 2021, 16 percent of Americans claimed to have dabbled in crypto. Across Asia the numbers were likely bigger. It was only a matter of time, Sam thought, before regulators engaged with crypto and banished the unlicensed exchanges.

The strategy was something like the opposite of Binance's. When FTX launched, in May 2019, Binance was merely one of a handful of crypto exchanges with roughly the same market share, of roughly 10 percent. One of those, BitMEX, soon ran afoul of the US Department of Justice, for "willfully failing to establish, implement and maintain an anti-money laundering program," and its founders, two American and one British, were variously fined, given probation, and placed under house arrest. Two other exchanges, OKEx and Huobi, reportedly watched executives being hauled off by the Chinese police, and saw their assets frozen. CZ had left China three years earlier, in late 2017, before that year's government crackdown, one of several before and after. He'd landed first in Singapore but finally settled in Dubai, which, among its charms, had no extradition treaty with the United States. Which was useful, as CZ's first response to new rules and regulations was often to ignore them, and count on the regulators to lack the nerve or the resources to take action.

That had been the smart thing to do, so far. In two years, Binance's share of crypto trading had boomed, from 10 percent to 50 percent. It offered financial products that local regulators either had banned or had yet to approve, and the regulators did not seem willing to do much about it. Binance's own exchange token, called BNB, was an example. BNB was to Binance what FTT was to FTX: a claim on the

women and lasers and loud booming music," he wrote in his journal afterward, "but there was an odd microclimate that seemed to follow me around as I wandered between the tables. It didn't start to crystallize until I walked by CZ a few . . . times and each time he broke eye contact with his eye candy and embraced me: *people were thinking about us, a lot.* This was the first time CZ seemed more interested in me than I was in him."

Out of thin air FTX minted three hundred fifty million FTT tokens. Sam offered a chunk of them to employees at five cents each, and another chunk to important crypto people, like CZ, who might be friends of the exchange, at ten cents. CZ initially declined, as did most of FTX's own employees—Ryan Salame was a big exception—but other outside investors bought up enough that Sam eventually raised the price, first to twenty cents and then to seventy. On July 29, 2019, FTT was listed on FTX and thus offered to the general public. ("That was the most nervous I'd ever seen Sam," said Nishad.) It opened at $1 and traded up to $1.50. Inside two months, Ryan Salame had made thirty times his money, and the outside buyers had made fifteen times their money. Of the original three hundred fifty million tokens minted, FTX had sold roughly sixty million at about a dollar less than they were now worth. Within a week or so, Sam's doubts about his ability to earn the trust of a mass audience had turned to regret for selling FTT way too cheap. Just how cheap became clear when, a few weeks later, CZ called Sam and offered to buy a 20 percent stake in FTX for $80 million.

It was as if a wildcatter had accidentally built his house on an oil field: Sam hadn't even really wanted to run a crypto exchange. He'd built a casino that offered gamblers the chance to make bets bigger than their bank accounts justified, at seemingly no risk to the casino or to the other gamblers, and it was exactly what the crypto world wanted. His timing, though accidental, was perfect, as big professional traders like Jane Street were entering the crypto markets and in need of a professional-grade futures exchange. Sam's choice of location, also accidental, was perfect too: Hong Kong was maybe the only spot in the world where he and CZ would both feel at ease.

he also thought that the license might double or even triple FTX's value overnight.

Before he could do any of this, he needed to get rid of CZ. CZ still owned the stake in FTX that he had bought in late 2019 for $80 million. Relations between Binance and FTX had since deteriorated into simmering resentment. Binance was the class bully, FTX the class nerd, and each took pleasure in using its special powers to torment the other. The Binance futures launch was a case in point. It had taken the Binance internal team three months longer to create their crypto futures trading platform than it had taken Gary, working by himself, to create FTX's. Once it was up and running, it attracted little interest. Or, rather, as Sam instantly noticed, what trading there was in Binance's new futures contract was fishy: instead of the spasmodic flows of naturally occurring market activity, there was a regular tick, tick, tick of trades. He guessed that Binance had created bots to trade its new contract with itself, to create the illusion of activity.

Wash trading, as it was called, would have been illegal on a regulated US exchange, though the sight of it did not bother Sam all that much. He thought it was sort of funny just how brazenly many of the Asian exchanges did it. In the summer of 2019, FTX created and published a daily analysis of the activity on other exchanges. It estimated that 80 percent or more of the volume on the second- and third-tier exchanges, and 30 percent of the volume on the top few exchanges, was fake. Soon after FTX published its first analysis of crypto trading activity, one exchange called and said, *We're firing our wash trading team. Give us a week and the volumes will be real.* The top exchanges expressed relief, and gratitude for the analysis, as, until then, lots of people assumed that far more than 30 percent of their volume was fake.

Sam was less surprised that Binance was wash trading than by how badly they were doing it. "They were doing a B-minus job at market manipulation," he said. One Binance bot would make a wide market

astute," said one. "He'll never talk about any exchange. He thinks it's free marketing. But FTX worried him. From 2019 on, he only spoke of FTX. He thought FTX was the only real threat to his position." A threat in which he was, weirdly, the second-largest shareholder, after Sam.

By the middle of 2021, Sam saw that he could not sweet-talk regulators and at the same time have CZ as a big investor. If you wanted to be the teacher's pet, you couldn't sit in the back of the classroom with the badass in the leather jacket. The first thing every regulator asked for was a list of your investors, and personal details about them. "They were asking CZ what his family situation was and where he lives, and CZ didn't want to say," said one former Binance employee. In the end, Sam told CZ that he wanted to buy him out of his FTX shares. For the stake he'd paid $80 million to acquire, CZ demanded $2.2 billion. Sam agreed to pay it. Just before they signed the deal, CZ insisted, for no particular reason, on an extra $75 million. Sam paid that, too. Whatever gratitude CZ felt about his two-billion-dollar windfall he hid. "From then it was a cold war," said Sam.

The buyout of CZ occurred against a backdrop of the bigger public relations assault. Sam was now a regular on television and had appeared on the cover of *Forbes* magazine. He still had no idea how to create a brand, and, as ever, zero interest in expert opinion about how to do it. He decided to figure it out from scratch, by talking it over internally, hurling some money around, and seeing what worked. With one hand he was handing CZ $2.275 billion; with the other he was writing memos to people inside FTX in which he ruminated, as might a Martian, on what caused ordinary Americans to like and trust a product. "We're currently ahead in tech and favorability ratings, and behind in name recognition," he wrote. "We need to get 50m low engagement users to decide to switch from Coinbase to FTX. This will take a fairly forceful nudge!"

a shave. He walked over and climbed into the car, as if he'd been expecting us. He needed a ride home, which of course raised the question of how, and why, he'd come to be here in the first place.

"You know what's weird to think about?" he said, as we left the office behind. "Saturday. Saturday everything was normal."

I did my best to reconstruct what had happened the previous few weeks, before reconsidering what had happened the previous few years. There'd been another dustup between Sam and CZ that, when it happened, had not seemed all that important. In late October, Sam had flown to the Middle East to raise money and, in the bargain, find a second home, in the Eastern Hemisphere, for FTX. On the evening of October 24, 2022, he bumped into CZ at a conference in Riyadh. It was the first time in nearly three years they'd been in the same room. They'd had a brief, awkward chat, only because it took less effort than not having it. "It was a five-minute conversation in which no real information was exchanged," said Sam. "It was like fake nice. We dispensed with our obligation to acknowledge we were both there." The next day, Sam had flown to Dubai to meet with its financial regulators. The regulators at the time hoped that FTX might make Dubai its Eastern Hemisphere headquarters. Sam later wrote up the message he'd tried to convey to them. "I love Dubai," he said.

> But we *can't* be in the same place as Binance. . . . This is for two reasons: first they are constantly devoting significant company resources to trying to hurt us; and second that they soil the reputation of wherever they are. I can't emphasize this enough: in general I hear great things from other jurisdictions/regulators etc. about Dubai and the UAE [United Arab Emirates], *except* that there's a constant refrain of: *that's the jurisdiction that accepted Binance, and so we don't trust their standards.*

It was unclear to Sam, if Dubai decided to rid itself of CZ and his exchange, whether any country in which CZ would be willing to live

would accept them. In these woods, CZ was the biggest bear and Sam seemed to be going out of his way to poke him. Dubai was tiny, Houston with sheikhs. Sam's bid to turn CZ into a homeless fugitive was bound to get back to him. And yet Sam didn't leave it at that. On October 30, when he returned to the Bahamas he tweeted a joke about CZ's inability to shape US crypto regulations. "Uh, he is still allowed to go to DC, right?"

Three days later, on November 2, the crypto news site CoinDesk published an article about a curious document that appeared to have been leaked to them by someone inside Alameda Research, or perhaps someone who lent money to Alameda Research. It wasn't a formal balance sheet. There was no sign that it had been audited, or that it presented a complete picture of the contents of Alameda Research, or that it was even real. It listed \$14.6 billion of assets and \$8 billion of liabilities that were supposedly inside of Alameda Research as of June 30, 2022. What the CoinDesk piece wanted to highlight was that more than a third of the assets were FTT, the token FTX had issued three years earlier.

In and of itself the article struck people inside FTX as of no more than prurient interest.* Everyone noticed that one of its contributors was the current girlfriend of Eric Mannes, Caroline Ellison's former boyfriend at Jane Street. The previous month, the couple had visited the Bahamas and stayed with employees of Alameda Research at Albany: Had the leak somehow originated inside the company? There was also the frisson that came with catching even a glimpse of the dragon's hoard. But the piece did not alarm or even surprise anyone at FTX. FTT was, in effect, equity in FTX—it had a claim on the first third of FTX's revenues. FTX had generated a billion dollars

* Even informed outsiders were not all that surprised. Steve Ehrlich, the *Forbes* reporter who had been assigned to determine Sam's wealth, said that he said to himself when he saw the piece, Congratulations on knowing something we knew two years ago.

exchanges themselves routinely lost their customers' money. Implausible because of who Sam was, and how he related to people. He had no clue how to engage with ordinary people in the way ordinary people needed engaging with, when you ran an exchange. To create a successful exchange, you needed to attract a crowd; you needed to relate to a mass audience. You needed *customers*. And you only got them if they trusted you. And they only trusted you if they knew who you were or thought they did. Sam wasn't sure his own colleagues knew who he was, which was why he was writing memos to explain it.

Plus he'd already tried and failed to do it. Back in May 2018, in Berkeley, Sam had asked Gary Wang to write the code for a bitcoin exchange, and within a month Gary had done it. CryptonBTC, it was called. They put it out on the web without any idea how to attract attention to it. No one showed up to trade on it. It was as if it had never happened. The code Gary had written for the first exchange had been sweet, however. From the total nothingness that had been CryptonBTC, Sam had learned that if he asked Gary to create a crypto futures exchange, he could do it in a month, and it would be more reliable and less risky for its users than any existing exchange. Gary was a genius.

In Hong Kong, Sam and his small team began to pitch the billionaire founders of existing exchanges on the idea of paying Alameda Research (Gary) to create a crypto exchange, different in important ways from any that existed. Alameda would supply the technology; the existing exchanges would supply the customers, and the trust. The most likely buyer, and the person to whom Sam himself pitched the idea, was CZ.

CZ was Changpeng Zhao, CEO of the crypto exchange Binance. Born in Jiangsu province, he was raised, from adolescence, in Canada, and educated there, returning eventually to China, with Canadian citizenship. He'd run through some ordinary jobs on the fringes of high finance—including a stint as a developer at Bloomberg—before landing as the chief technology officer at OKCoin. He'd left OKCoin in 2015 and created Binance in 2017; two years later, he was being described in industry publications as "the most powerful

astute," said one. "He'll never talk about any exchange. He thinks it's free marketing. But FTX worried him. From 2019 on, he only spoke of FTX. He thought FTX was the only real threat to his position." A threat in which he was, weirdly, the second-largest shareholder, after Sam.

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